MANNOSE BINDING LECTIN AS A DIAGNOSTIC MARKER FOR CORONARY ARTERY DISEASE IN HYPERTENSIVE PATIENTS

ABSTRACT

Background :

Hypertension is an independent risk factor for cardiovascular disease. Inflammation plays a major role in atherosclerosis. Markers of innate immunity have been shown to predict the development of coronary artery disease. MBL (mannose binding lectin) being a component of innate immunity can be used as a marker of cardiovascular risk in hypertension.

Aim & Objectives:

The study was conducted to

- Evaluate the risk of coronary artery disease in recently diagnosed hypertensive patients by estimating serum mannose binding lectin levels.
- Correlate the serum mannose binding lectin levels with (a) C – Reactive Protein [CRP] (b) lipid profile (c) body mass index & (d) renal function test.

Materials & Methods:

This cross sectional case control study was conducted among 90 subjects who were divided into three groups as follows

Group A : 30 recently diagnosed hypertensive patients (< 6 months duration)

Group B : 30 hypertensive patients who had myocardial infarction recently (< 7 days)

Group C : 30 age & sex matched healthy controls

Serum levels of MBL , CRP , total cholesterol , triglycerides , HDL –C , urea , creatinine & uric acid were measured . Collected data were analysed by SPSS – 16 software.

Results & Conclusion:

The serum MBL levels were significantly elevated in hypertensive patients (mean = 823.45) and in hypertensive with myocardial infarction (mean = 1163.39) as compared with control population (mean = 607.15 with p value – 0.001).Positive correlation was observed between higher levels of MBL (> 1000 ng / mL) and CRP. Multivariate logistic regression analysis adjusted for common factor showed the serum MBL level was an independent indicator of cardiovascular disease in hypertension (r = 0.85).From the ROC curve , it has been determined that MBL has good sensitivity (93%) & specificity (96%) with a positive predictive value of 96%.

Our findings suggested that MBL is an independent determinant of myocardial infarction in hypertensive patients & the determination of MBL status might be used to identify the patients at increased risk of developing cardiovascular complications.

Keywords :

Mannose binding lectin (MBL) • Hypertension • Coronary artery disease • Atherosclerosis • Inflammation